

CLAIMS

I claim:

1. An exercise device comprising:
 - a base having two side members and front member that
 - 5 extends between said side members;
 - at least one truss member extending from said base
 - a rotatable shaft positioned on said truss member;
 - a flywheel mounted on said shaft;
 - a rotatable drive shaft mounted on said truss member;
 - 10 a first one-way clutch and a second one-way clutch
 - mounted on said drive shaft;
 - a means for operatively connecting said drive shaft to said
 - rotatable shaft whereby rotation of said drive shaft causes said rotatable
 - shaft to rotate;
 - 15 a pair of arms having a first end that is pivotally mounted on
 - said base and a second end that extends from said base;
 - a foot pad positioned on the second end of each of said
 - arms; said foot pads being disposed to move in an arcuate path towards
 - and away from said side members of said base and the movement of said
 - 20 foot pads being in a direction that is substantially parallel to said front
 - member of said base;
 - a lever operatively connected to each arm whereby
 - movement of said arms causes a movement of said levers;
 - means for operatively connecting one of said levers to said
 - 25 first one-way clutch and said other lever to said second one-way clutch
 - whereby movement of said arms towards said base causes said levers to
 - rotate said first and second one-way clutches in a direction that causes
 - said drive shaft to rotate which in turn rotates said shaft upon which said
 - flywheel is mounted, said flywheel providing resistance to movement to
 - 30 said arms and said levers, movement of said arms away from said base

rotates said levers in a direction that does not activate said first and second one-way clutches and does not cause said drive shaft to rotate.

2. The device of claim 1 wherein a one-way clutch is mounted
5 on said rotatable shaft and said means for operatively connecting said drive shaft to said rotatable shaft connects to said one-way clutch whereby said one-way clutch causes said rotatable shaft to rotate in only one direction.

10 3. The device of claim 1 wherein a first and a second truss member extends from said base, said first and second truss members being substantially the same shape and size, the first and second truss members being disposed in substantially parallel relationship and extend in a direction that is substantially perpendicular to said base.

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4. The device of claim 3 wherein said rotatable shaft and said drive shaft extend between said first and second truss members.

5. The device of claim 1 wherein a hand grip is positioned on
20 said portion of said truss member that is spaced apart from said base, said hand grip providing a balancing support for a user of said device.

6. The device of claim 1 wherein said flywheel has a groove in its outer periphery and a tension belt is positioned in said groove, said
25 belt being moveable to vary the tension on said flywheel whereby said resistance to rotation of said flywheel can be varied which varies the resistance to movement for said foot pads and levers.

7. The device of claim 1 wherein a pair of rotatable cylinders
30 extend between said front member of said base and said truss member, one of said arms and one of said levers being secured to one of said

rotatable cylinders whereby movement of said foot pads causes said cylinders to rotate.

5 8. The device of claim 7 wherein said levers have a first end connected to one of said rotatable cylinders and a second end that extends from said rotatable cylinder, said levers being positioned in adjacent spaced apart relationship to said truss member.

10 9. The device of claim 8 wherein said means for operatively connecting said levers to said first and second one-way clutches is a chain having a first end and a second end, the first end of said chain being connected to said levers, said chain extending over said one-way clutches and said second end of said chain being operatively connected to said truss member.

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10 10. The device of claim 9 wherein said second end of said chain is connected to the first end of a spring and said second end of said spring is connected to said truss member, whereby said spring expands and retracts as said chain advances over said one-way clutch.

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11. The device of claim 1 wherein a base plate is pivotally mounted on said second end of said arm and said foot pad is secured to said base plate.

25 12. The device of claim 11 wherein a link member is positioned to extend from said base plate to said front member of said base, said link member being pivotally secured to said front member and said foot pad, said link member acting to maintain said foot pad at a desired angle as said foot pad travels through its range of motion on said arm.

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13. The device of claim 12 wherein said desired angle is from about 10° to about 20° with respect to the surface upon which said exercise device is positioned.

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14. An exercise device comprising:

a base having two side members and a front member that extends between said side members;

at least one truss member extending from said base;

10 a pair of arms having a first end that is pivotally mounted on said base and a second end that extends from said base;

a foot pad positioned on said second end of each of said arms, said foot pads being disposed to move in an arcuate path towards and away from said side members of said base and the movement of said foot pads being in a direction that is substantially parallel to said front member of said base;

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a lever operatively connected to each arm whereby movement of said arms causes a movement of said levers;

a hydraulic cylinder having a first end and a second end, the first end of hydraulic cylinder being connected to one of said levers, the second end of said hydraulic cylinder being connected to said truss member, said hydraulic cylinders providing resistance to movement to said arms and said levers.

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15. The device of claim 14 wherein said hydraulic cylinders are one-way hydraulic cylinders that provide resistance when said hydraulic cylinders are extended when said foot pads are advanced in a direction towards said side members of said base.

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16. The device of claim 15 wherein a spring is attached to said levers and to said truss member, said spring acting to bias said foot pads to return to a desired position.

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17. The device of claim 16 wherein said spring has a first end and a second end, said first end of said spring is attached to each of said levers and said second end of said spring is attached to said truss member.

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18. The device of claim 14 wherein a hand grip is positioned on said portion of said truss member that is spaced apart from said base, said hand grip providing a balancing support for a user of said device.

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19. The device of claim 14 wherein a pair of rotatable cylinders extend between said front member of said base and said truss member, one of said arms and one of said levers being secured to one of said rotatable cylinders whereby movement of said foot pads causes said cylinders to rotate.

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20. The device of claim 19 wherein said levers have a first end connected to one of said rotatable cylinders and a second end that extends from said rotatable cylinder, said levers being positioned in adjacent spaced apart relationship to said truss member.

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21. The device of claim 14 wherein a base plate is pivotally mounted on said second end of said arm and said foot pad is secured to said base plate.

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22. The device of claim 21 wherein a link member is positioned to extend from said base plate to said front member of said base, said link member being pivotally secured to said front member and said foot pad, said link member acting to maintain said foot pad at a desired angle as said foot pad travels through its range of motion on said arm.

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23. The device of claim 22 wherein said desired angle is from about 10° to about 20° with respect to the surface upon which said exercise device is positioned.